UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,104	03/04/2008	Zoltan-Josef Horvath	OST-061157	9352

22876 7590 03/17/2010

FACTOR & LAKE, LTD
1327 W. WASHINGTON BLVD.
SUITE 5G/H
CHICAGO, IL 60607

EXAMINER	
HOQUE, FARHANA AKHTER	
ART UNIT	PAPER NUMBER
2831	
MAIL DATE	DELIVERY MODE
03/17/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,104	HORVATH ET AL.	
	Examiner	Art Unit	
	FARHANA HOQUE	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-14 and 17-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-14 and 17-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments filed 11/17/2009 have been fully considered but they are not persuasive.

Response to Arguments

2. Applicant argues that Walker does not teach step b) of amended claim 1 in the meaning of "evaluating" But rather, in Walker, a PLC 130 may receive input data such as a surface area and /or desired paint film thickness. Obviously, these input data are put in by means of keyboard, and not be means of measured values like numerals 132, 134 in Figure 4.

In response to Applicant arguments, the Examiner respectfully disagrees. Nowhere in amended claim 1 does it specifically state the word "evaluating" or any sort of evaluation being performed. Responding to applicant's argument on "evaluating", an evaluation is being performed through the PLC. The control PLC or computer receives inputs from sensors and may selectively control the control circuit to various electrodes so as to more appropriately operate the electrocoat painting system. Individual membrane electrode cells/electrodes may be monitored and controlled, such as for "trending" or otherwise recording data such as current levels, voltage drop, membrane resistance, acid balance, etc., for the various membrane electrode cells, with such data available for the

electrocoat paint system operator to use for optimization of the overall electrocoat painting process by individual control over the membrane electrode cells. Therefore, reading the claims in the broadest sense, an evaluation is thus being performed.

Applicant further argues that in original claim 3, determining of a surface is accomplished by using the measured maximum starting current which flows through the article at the start of immersion coating. Walker in no way discloses this feature, which is now incorporated into amended claim 1. That is, Walker does not take notice of the above mentioned relationship of Applicant's innovation between maximum starting current and article surface.

Examiner respectfully disagrees. Reading the claims in the broadest sense, a maximum starting current which flows through the article at the start of immersion coating is being measured. As shown in col. 3, lines 40-55, describes measuring the level of the electrical current flow to one more of the electrodes; disabling the electrical current flow in response to the electrical current flow reaching or exceeding a predetermined level, thus a maximum starting current is being measured.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 5, 9-14, 18, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Walker et al. (U.S. Patent No. 5,759,371).

With respect to claim 1, Walker et al. discloses a method for determining the thickness of a layer of lacquer which is applied by electrophoretic immersion coating to an article [100] (see Fig. 4) wherein the article [100] (see Fig. 4) for immersion coating is immersed in a lacquer immersion bath [20] (see Fig. 4)

containing lacquer and forms an electrode which generates, together with at least one counter electrode [104] (see Fig. 4), an electrical field that comprising the following steps:

a) determining the electrical charge flowing through the article [100] (see Fig. 4) during immersion coating (col. 8, claim 1, lines 46-48).

b) measuring the maximum starting current (col. 4, lines 26-30; also col. 3, lines 40-55) which flows through the article [100] (see Fig. 4) at the start of immersion coating and using this measured starting current to determine the surface the surface of the article [100] (see Fig. 4) exposed to the lacquer [20] (see Fig. 4; also col. 7, lines 56-58).

c) determining are the thickness of the layer of lacquer based on the electrical charge determined in step a) and the surface determined in step b) (col. 9, claim 6, lines 15-17).

With respect to claim 2, Walker et al. discloses the method of claim 1, wherein the electric current flowing through the article [100] (see Fig. 4) during immersion coating is measured for determining the electric charge in step a) (col. 8, claim 1, lines 46-48).

With respect to claim 5, Walker et al. discloses the method of claim 1, wherein the thickness of the layer of lacquer is determined in step c) by taking

into account the pH of the lacquer [20] (see Fig. 4; col. 9, claim 6, lines 15-17; also col. 9, claim 7, lines 18-22).

With respect to claim 9, Walker et al. discloses the method of claim 1, wherein the thickness of the layer of lacquer is determined in step c) by taking into account the spacing between the article [100] (see Fig. 4) and the at least one counter electrode [104] (see Fig. 4).

With respect to claim 10, Walker et al. discloses the method of claim 1, wherein the voltage applied between the electrode [100] (see Fig. 4) and the at least one counter electrode [104] (see Fig. 4) is controlled in such a way that the starting current at the start of immersion coating at least approximately matches a predetermined value (col. 3, lines 41-51).

With respect to claim 11, Walker et al. discloses the method of claim 10, wherein the predetermined value depends on parameters of the lacquer (col. 9, claim 4, lines 8-11).

With respect to claim 12, Walker et al. discloses the method of claim 1, wherein the immersion coating is finished as soon as the determined layer thickness has reached a predeterminable target value (col. 1, lines 30-35).

With respect to claim 13, Walker et al. discloses a system for determining the thickness of a layer of lacquer which is applied by electrophoretic immersion coating to an article [100] (see Fig. 4) comprising:

an immersion bath [20] (see Fig. 4) for receiving a lacquer in which the article [100] (see Fig. 4) can be immersed,

a voltage source [102] (see Fig. 4) of which one pole (see Fig. 4) can be connected to the article [100] (see Fig. 4) and of which the other pole (see Fig. 4) is connected to at least one counter electrode [104] (see Fig. 4) reaching into the immersion bath,

a charge measurement apparatus for determining the electrical charge flowing through the article [100] (see Fig. 4) during immersion coating a computer [130] (see Fig. 4) which determines the thickness of the layer of lacquer from the charge measured by the charge measurement apparatus and the surface (col. 7, lines 56-58) of the article [100] (see Fig. 4) exposed to the lacquer [20] (see Fig. 4), wherein the maximum starting current which flows through the article [100] (see Fig. 4) at the start of immersion coating can be stored in the computer [130] (see Fig. 4) and utilized to determine the surface of the article exposed to the lacquer (col. 3, lines 40-55; also col. 4, lines 26-30).

With respect to claim 14, Walker et al. discloses the system of claim 13, wherein the charge measurement apparatus means for determining the charge comprises an ammeter (col. 2, lines 36-38).

With respect to claim 18, Walker et al. discloses the system of claim 13, comprising a pH sensor (col. 9, claim 7, lines 18-22) which is connected to the computer [130] (see Fig. 4) for measuring the pH factor of the lacquer [20] (see Fig. 4).

With respect to claim 22, Walker et al. discloses the system of claim 13, comprising a control device (col. 7, lines 21-26) which is configured to control the voltage applied between the electrode [100] (see Fig. 4) and the at least one counter electrode [104] (see Fig. 4) in such a way that the starting current at the start of immersion coating has a predetermined value [102] (see Fig. 4; also col. 2, lines 51-55).

With respect to claim 23, Walker et al. discloses the system of claim 13, comprising a controller (col. 7, lines 21-26) which is configured to terminate the immersion coating as soon as the specific lacquer thickness has reached a predeterminable value (col. 1, lines 30-33).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 4, 6-8, 17 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nobutoh et al. (U.S. Publication No. 2003/0177978 A1).

With respect to claim 4, Walker et al. discloses the method of claim 1. Walker et al. does not disclose the thickness of the layer of lacquer being determined in step c) by taking into account the temperature of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses the thickness of the layer of lacquer being determined in step c) by taking into account the temperature of the lacquer (col. 3, para [0040], line 7- col. 4, para [0040] line 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Walker et al. to include a step to determine the thickness of the layer of lacquer by taking into account the temperature of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 6, Walker et al. discloses the method of claim 1.

Walker et al. does not disclose the thickness of the layer of lacquer being determined in step c) by taking into account the electrical conductivity of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses the thickness of the layer of lacquer being determined in step c) by taking into account the electrical conductivity of the lacquer (col. 1, para [0011], lines 6-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Walker et al. to include a step to determine the thickness of the layer of lacquer by taking into account the electrical conductivity of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 7, Walker et al. discloses the method of claim 1.

Walker et al. does not disclose the thickness of the layer of lacquer being determined in step c) by taking into account the solids content of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses the thickness of the layer of lacquer being determined in step c) by taking into account the solids content of the lacquer (col. 3, para [0040], line 7-col. 4, para [0040] line 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Walker et al. to include a step to determine the thickness of the layer of lacquer by taking into account the solids content of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the

coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 8, Walker et al. discloses the method of claim 1.

Walker et al. does not disclose the thickness of the layer of lacquer being determined in step c) by taking into account the density of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses the thickness of the layer of lacquer being determined in step c) by taking into account the density of the lacquer (col. 1, para [0009], lines 1-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Walker et al. to include a step to determine the thickness of the layer of lacquer by taking into account the density of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 17, Walker et al. discloses the system of claim 13.

Walker et al. does not disclose a temperature sensor, which is connected to the computer, for determining the temperature of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses a temperature sensor, which is connected to the computer, for

determining the temperature of the lacquer (col. 3, para [0040], line 7- col. 4, para [0040] line 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Walker et al. to include a temperature sensor being connected to the computer, for determining the temperature of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 19, Walker et al. discloses the system of claim 13.

Walker et al. does not disclose a conductivity sensor, which is connected to the computer, for measuring the conductivity of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses the thickness of the layer of lacquer being determined in step c) by taking into account the electrical conductivity of the lacquer (col. 1, para [0011], lines 6-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Walker et al. to include a conductivity sensor, which is connected to the computer, for measuring the conductivity of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 20, Walker et al. discloses the system of claim 13.

Walker et al. does not disclose a sensor, connected to the computer, for determining the solids content of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses a sensor, connected to the computer, for determining the solids content of the lacquer (col. 3, para [0040], line 7- col. 4, para [0040] line 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Walker et al. to include a sensor, connected to the computer, for determining the solids content of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 21, Walker et al. discloses the system of claim 13.

Walker et al. does not disclose a density sensor, which is connected to the computer, for measuring the density of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses a sensor, connected to the computer, for determining the density of the lacquer (col. 1, para [0009], lines 1-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Walker et al. to include a sensor, connected

to the computer, for determining the density of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FARHANA HOQUE whose telephone number is (571)270-7543. The examiner can normally be reached on Monday - Friday 8:30-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/FARHANA HOQUE/
Examiner, Art Unit 2831

/Diego Gutierrez/
Supervisory Patent Examiner,
Art Unit 2831